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ON THE IDENTITY OF *APANTELES INFIMUS* HALIDAY AND OF *APANTELES INFIMUS* HALIDAY OF MARSHALL (HYM. BRACON.)

By D. S. Wilkinson, F.R.E.S.

(*Imperial Institute of Entomology.*)

Apanteles infimus Hal.

Microgaster infimus Haliday, 1834, *Ent. Mag.* **2** : 243. *Apanteles infimus* Haliday, Reinhard, 1881, *Deut. ent. Z.* **25** : 44.

♀♂. Black; the extreme apex of the front femora and the extreme base of the hind tibiae, occasionally the extreme base of the four front tibiae and the extreme apex of the middle femora, red testaceous, these areas sometimes quite extensively red testaceous, commonly, however, particularly in the ♂, entirely darkened or black; palpi and front tibial spurs strongly darkened or even black, the tibial spurs of the four posterior legs pale; wings infumated, and the setae coloured; wing-veins, stigma, and metacarp, uniformly brown; stigma uniformly opaque.

♀♂. *Head*: face, clypeus, facial and frontal orbits, and frons, minutely punctate (degree 2); facial depressions nearer to apex of clypeus than to the eyes; vertex exceedingly minutely punctate (degree 1) and/or minutely coriaceous; posterior ocelli equidistant from each other and the eyes; flagellum of ♀ about equal to combined length of thorax and abdomen, of ♂ longer than combined length of thorax and abdomen together with three times the length of the head, about equal to three times the length of the thorax. *Thorax*: mesonotum regularly, closely punctate (degrees 2 and 3) throughout; disc of scutellum smooth and with widely scattered punctures (degree 3); the smooth, non-excavate area of lateral faces of scutellum reaching up to, but not beyond, half-way to base of scutellum, in the ♂ commonly not thus reaching up even half-way; propodeon along the median longitudinal line not depressed, more usually smooth, and rugose at apex, in basal half otherwise punctate (degrees 2 or 3), occasionally quite strongly so (degree 4), the apical angles smooth and shining save for some variable indefinite sculpture. *Wings*: stigma rather shorter than metacarp. *Legs*: hind coxae basally above strongly punctate (degree 4), apically above and on outer faces with well-separated, minute (degree 2) or even exceedingly minute punctures; hind tibial spurs equal, half the length of the basal segment of the hind tarsus. *Abdomen* (figs. 1, 2): 1st tergite basally excavate and aciculate, medially tumescent with this tumescence occasionally in the form of a short blunt carina, the apical half turned over and strongly punctate (degree 4) save for a smooth narrow median longitudinal area, which runs from the median tumescence to the smooth median apical lunule and which is occasionally slightly depressed, the punctures commonly not clearly delimitated and with much rugose aciculation, the upper layer of the tergite more usually contracting slightly at apex, and the lower layer not so contracting, with the result that the apical angles of the tergite and commonly also large portions of the apical margin are strongly depressed, the tergite apically emarginate; 2nd tergite with well-separated, minute punctation across in the apical half, otherwise more or less smooth; 3rd tergite smooth narrowly across apex and broadly across base and in a broad median basal triangle, otherwise with well-separated, minute punctation, in the ♂ more extensively punctate than in the ♀; succeeding tergites minutely punctate; 3rd and 4th ventrites with a broad median longitudinal excision throughout their basal third, otherwise apparently without median longitudinal suturing; 5th ventrite with median longitudinal suture, and with both its basal and its apical margin strongly sinuate; hypopygium broadly membranous throughout the median line, and its apex membranously acute; ovipositor sheaths equal in length to

the hind tibia, the ovipositor rather shorter than combined length of hind tibia and the four basal segments of the hind tarsus.

Length: 2·0–2·5 mm.

Redescribed from the following material:—British Museum: Haliday Collection, 1 ♀ (*type*), 1 ♂, no. 17; Marshall Collection, 1 ♀, N. Forest; General Collection, Hertfordshire, Boxmoor, 3 ♀♀, 2.vi.1936, 24.vii.1937, Bricket Wood, 5 ♀♀, 1 ♂, 8.vii.1937, Buckinghamshire, Brickhill, 1 ♀, 21.vi.1937 (*R. B. Benson*). Plymouth Museum: Bignell Collection: a card of two (2 ♀♀), reg. no. 2909a, Yealverton, 4.viii.1885, det. as *sicarius* Marsh.; 2 ♀♀, reg. no. 3969, in register dated 16.vi.1891 (*J. H. Wood*), det. as *infimus* Hal. Norwich Castle Museum: Bridgman Collection, 1 ♀, reg. no. 697, det. as ? *infimus* Hal., in register dated vi.1886 (*W. H. B. Fletcher*). Essex Field Club: Fitch Collection, 1 ♀, nos.

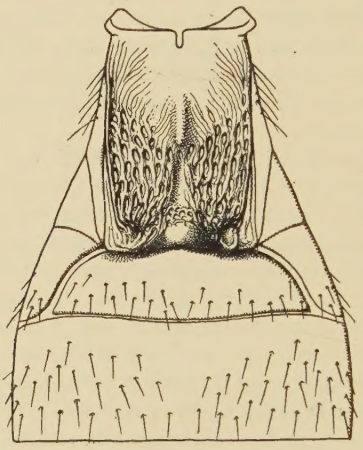

Fig. 1.—*Apanteles infimus* Hal., basal tergites, ♀. × 80.

177 and A3467. Oxford University Museum: Binsey, 2 ♀♀, 1 ♂, coll. ix.1925, em. 25.vii.1926, 29.vii.1926, 4.viii.1926 (*E. G. R. Waters*). A. C. W. Wagner's Collection: Haake, 17.vii., ser. no. 394, det. Schmiedeknecht as *infimus* Hal. D. S. Wilkinson's Collection: England, Hampshire, Brockenhurst, 8 ♀♀, 12 ♂♂, 28.vi.1933, 25–28.vi.1933 (*G. Nixon*), North Devon, Romansleigh, 210 ♀♀, 128 ♂♂, 26.vii.1938 (*R. L. E. Ford*).

Further material examined:—Zoologisches Museum der Universität, Berlin: Reinhard Collection, 2 ♀♀, 2 ♂♂, mus. ser. no. 26962, det. as *infimus* Hal. Imperial Institute of Entomology: Goyt Valley, Cheshire, 3 ♀♀, 26.vii.1936 (*H. Britten*).

Type in the British Museum.

Host. The original description of *infimus* is without host record. Of the material from which I have redescribed the species, Bridgman's single female is recorded in his register to have been bred from the Tineid *Coleophora apicella* Staint., now known as *C. lineola* Haw., Bignell's two females no. 3969 to have been bred from a species of *Coleophora*, and Waters' material from a species of *Coleophora* on *Juncus articulatus*. Nixon's series, and Ford's long series from Romansleigh, were swept from *Juncus*. Ford reports that the *Juncus* from which he obtained his material was in a very wet, boggy area, and that

Coleophora caespititiella Zell. was in abundance. The remainder of the material is without host record.

Marshall's records of hosts for *infimus*, namely the Tineid *Acrolepia pygmaeana* Haw. and the Tineid *Chauliodus*, now *Epermenia, chaerophyllella* Göze, are to be ignored since the *Apanteles* he had before him was not *infimus*. Brischke's records also, namely the Geometrid *Pseudoterpna cythisaria* Schiff., now *P. pruinata* Hufn., and the Tineid *Oecophora noricella* Zell., a species

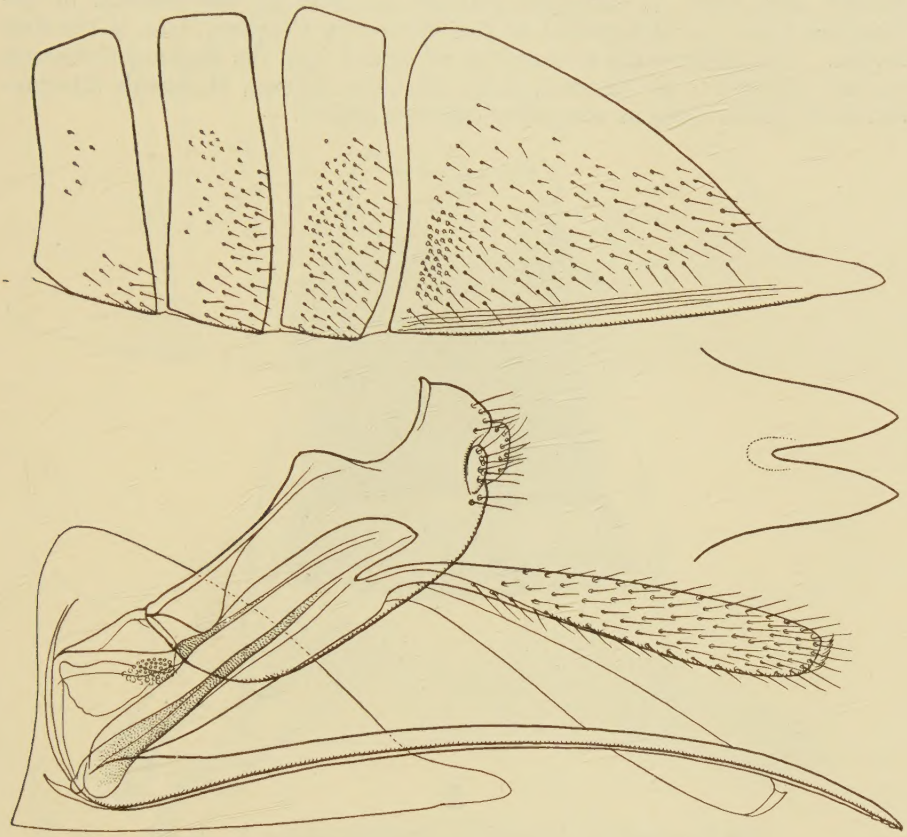

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Fig. 2.—*Apanteles infimus* Hal., apical ventrites and, below, genitalia, side view, ♀, × 80; and apex of hypopygium, opened out, dorsal view, further much enlarged, to show apical slit.

referred by Marshall to the genus *Butalis*, but nowadays to *Scythris*, are certainly to be ignored, although I have not seen the *Apanteles* material upon which they were based.

Cocoons unknown. Brischke's record of gregarious, yellow, woolly cocoons cannot possibly be accepted.

Commentary. Haliday originally described his *infimus* from an unstated number of specimens of both sexes in the collection of the Entomological Society of London, " (*Mus. Soc. Ent.*)," the material having been captured, the habitat being given as " ad litora minus frequens." In the British Museum,

amongst the remains of the material presented by the Entomological Society and bearing the correct museum register number showing that it was part of this material, and labelled "*infimus*" and "17," was a single female agreeing perfectly and in the minutest detail with Haliday's original description. I propose to accept this female as the type, which almost undoubtedly it is; and I am so labelling it. It agrees perfectly and in the minutest detail with all the other material before me from which I have redescribed the species, and notably also, which is extremely satisfactory, with all the material in the Reinhard Collection determined as this species by Reinhard, who is the first reviser. The single female recorded by me above from the Marshall Collection was not referred to by Marshall under the name *infimus*, Marshall's interpretation of *infimus* being an altogether different species.

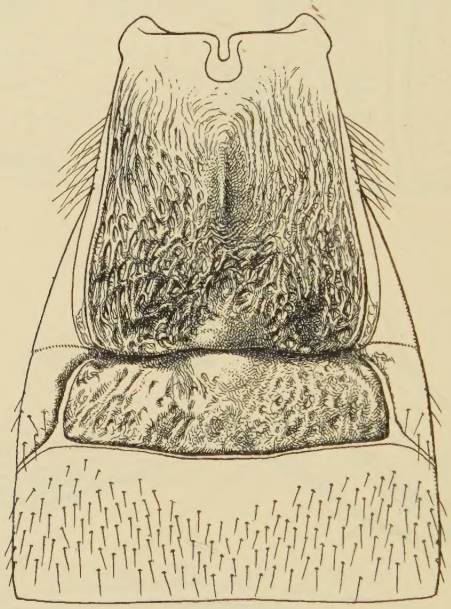

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Fig. 3.—*Apanteles imperator* sp. n., basal tergites, ♀. × 80.

This female I am accepting as the type of *infimus* is unique, also, in being the only specimen in the Haliday Collection from the Entomological Society with a name-label. It may also be remarked that it agrees with Haliday's description even as to the length and shape of the abdomen and tergites relative to *albipennis* Hal., now known as *halidaii* Marsh., the species referred to by Haliday as that one immediately preceding. This latter species was also described from the "*Mus. Soc. Ent.*," and in the Entomological Society's collection there was, also, a female agreeing perfectly with the original description of *albipennis*.

Apanteles infimus Hal. runs in my key (1932, *Trans. ent. Soc. Lond.* **80**, and as subsequently emended, especially in 1938, *Proc. R. ent. Soc. Lond.* (B) **7** : 133) to couplet 109, which should be altered as follows :—

109.	Ovipositor sheaths equal in length to hind tibia; Europe . .	*infimus* Hal.
	Ovipositor sheaths longer than hind tibia	109a.
	Ovipositor sheaths shorter than hind tibia	121.

Apanteles imperator sp. n.

Apanteles infimus Haliday, Marshall, 1885, *Trans. ent. Soc. Lond.* **1885** : 204 (*excl. syn.*); 1888, *Species Hymén. d'Eur.* **4** : 461–462.

♀. Black; apex of front femora, front tibiae wholly (save for some slight darkening), extreme apex of middle femora, about basal half or three-fifths of middle tibiae, about

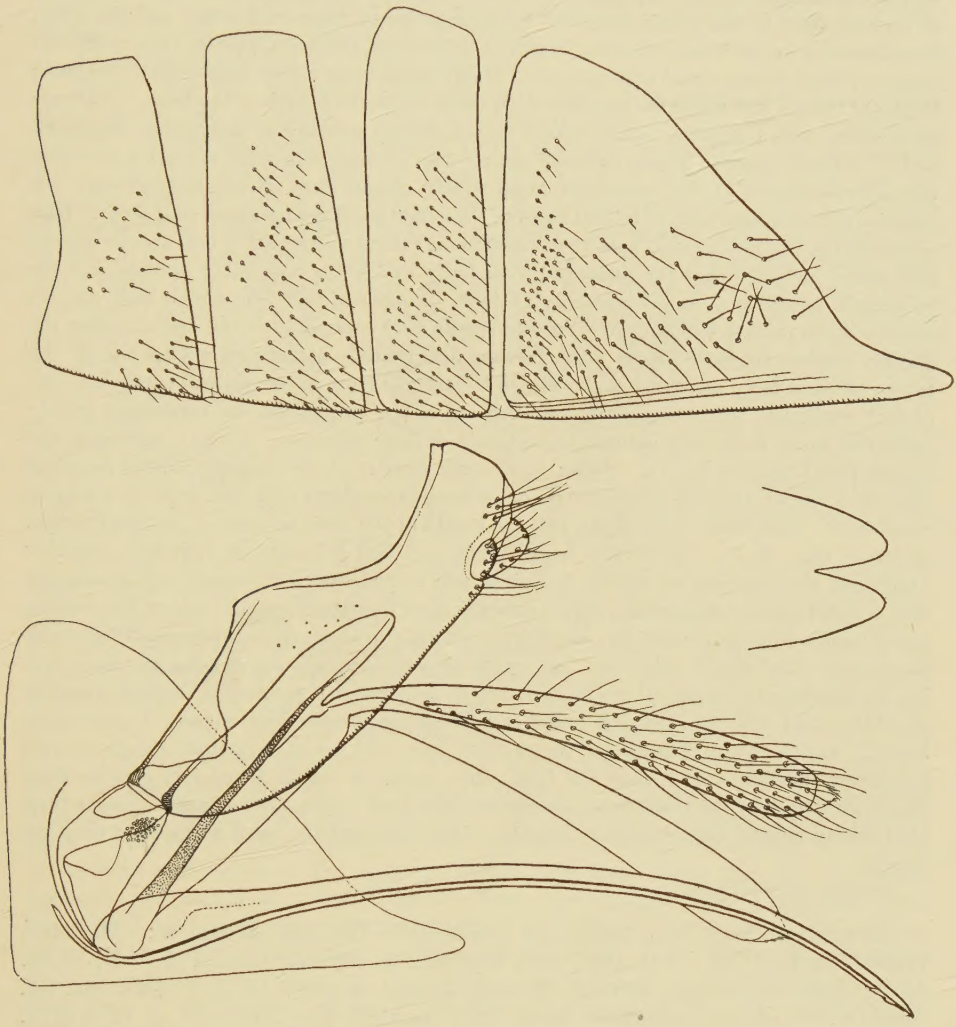

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FIG. 4.—*Apanteles imperator* sp. n., apical ventrites and, below, genitalia, side view, ♀, × 80; and apex of hypopygium, opened out, dorsal view, further much enlarged, to show apical slit.

basal three-fifths or three-fourths of hind tibiae, and extreme base of basal segment of hind tarsus, red testaceous; front tarsi slightly, and middle tarsus and palpi strongly, darkened; tibial spurs pale; wings infumated, or even strongly infumated, evenly throughout, and the setae coloured; stigma, metacarp, and wing-veins, uniformly brown; stigma uniformly opaque.

♂. Black; apex or even only extreme apex of front femora, perhaps occasionally extreme apex of middle femora, base or extreme base of the four anterior tibiae, and base of hind tibiae, red testaceous; front tarsi and palpi strongly darkened; tibial spurs pale: wings as in ♀.

♀♂. *Head*: face, clypeus, frontal orbits, and frons, minutely punctate (degree 2), the vertex exceedingly minutely punctate (degree 1); facial depressions much nearer to apex of clypeus than to the eyes; posterior ocelli equidistant from each other and the eyes; flagellum of ♀ longer than combined length of thorax and abdomen, shorter than combined length of head, thorax, and abdomen, of ♂ about equal to or rather longer than combined length of thorax and abdomen together with three times the length of the head. *Thorax*: mesonotum with regularly, rather closely placed minute punctation throughout (degrees 2 and 1), entirely smooth across extreme apex; disc of scutellum with minute punctation throughout (degree 1), the punctures more widely placed than on the mesonotum; the smooth, non-excavate area of lateral faces of scutellum reaching up about half-way to base of scutellum, but not beyond half-way; metanotal suture comprised of two arcs so shaped and joined medially that the metanotum medially at apex is noticeably pointed and the propodeon medially at base noticeably excised; propodeon narrowly across base smooth save for some minute punctation, otherwise rugose save commonly in the apical angles, the slightly sunken rugulose areola often further delimitated—sometimes noticeably so—by two or three or more carinulae, and costulae apparently more or less present comprised also of such carinulae, but carinulae in these regions of the propodeon are commonly merely rugosities which in no way delimitate an areola or form costulae. *Wings*: metacarp and stigma about equal in length. *Legs*: hind coxae basally above strongly closely punctate (degrees 3 and 4), apically above and on outer faces throughout with well-separated minute punctation; hind tibial spurs equal, half the length of the basal segment of the hind tarsus. *Abdomen* (figs. 3, 4): 1st tergite basally excavate and aciculate or rugulose, medially tumescent and rugulose or rugose, in apical half turned over and rugose and commonly with a slight median impression, across extreme apex depressed on each side of the median apical lunule, which is present but which is not strongly evident, the tergite apically strongly emarginate; 2nd tergite rugulose; 3rd tergite smooth narrowly across apex and base, and in a median basal triangle, otherwise with minute punctation; succeeding tergites minutely punctate; 2nd, 3rd, 4th, and 5th ventrites with median longitudinal suture; hypopygium broadly membranous throughout the median line, and its apex membranously acute; ovipositor sheaths shorter than the hind tibia, equal in length to or just shorter than combined length of the three basal segments of the hind tarsus, the ovipositor longer than hind tarsus, shorter than combined length of hind tibia and the basal segment of the hind tarsus.

Length: 2·5–3·0 mm.

Described from the following material:—British Museum: Marshall Collection, 1 ♀, "N," 1.ix.1884, det. Marshall as *infimus* Hal., 1 ♂, "N," 1.ix.1884; Lyle Collection, Kerton, Boston, a card of three (3 ♀♀), 1925, ser. no. 4962 (*H. W. Miles*), in register dated 15–17.ix.1925, New Forest, 1 ♂, 14.v.1917, ser. no. 3099 (*G. T. Lyle*), all det. Lyle as *infimus* Hal.; General Collection, England, Kent, Bexley, 2 ♀♀, 1 ♂, 18.viii.1935, 3 ♀♀, 1 ♂, viii.1935, 3 ♂♂, 16.ix.1935, Isle of Wight, Yarmouth, 2 ♀♀, 1 ♂, 22.viii.1935 (*R. L. E. Ford*), Isle of Wight, Yarmouth, 1 ♀, 1.ix.1935 (*L. T. Ford*), South Hampshire, Farley, 2 ♀♀, 12.vi.1938 (*R. B. Benson*). Essex Field Club: Fitch Collection, a card of three (2 ♀♀, 1 ♂), 4.ix.1884 (*G. Elisha*), 2 ♀♀, 1 ♂, 1 ?, ser. no. 1, and 3 ♀♀, 2 ♂♂, all det. as *infimus* Hal. Zoologisches Museum der Universität, Berlin: Güntersberga O., 2 ♀♀, 5.ix.1928 (*M. Hering*). Bundesanstalt für Pflanzenschutz, Wien: Bohemia, Thammühl bei Böhmisch Leipa, 1 ♀, 20.viii.

1936 (*Zimmermann*). NATURHISTORISKA RIKSMUSEUM, STOCKHOLM : Germany, Saxony, 3 ♀♀, 1 ♂, ser. no. 208 (*Herr Schütze per Dr. A. Roman*). D. S. WILKINSON'S COLLECTION : England, Oxford, Charlbury, 3 ♀♀, 1 ♂, v.1934 (*Dr. Hugh Scott*), Kent, Bexley, 23 ♀♀ (one the *type*), 13 ♂♂, coll. 12.vi.1937, em. 2.vii.1937, 5 ♀♀, 3 ♂♂, pup. 1.viii.1937, em. 16.viii.1937, Dartford Heath, 1 ♀, coll. 24.iv.1938, em. 16.v.1938, 1 ♀, coll. 6.iv.1938, em. 25.v.1938, Sussex, Ditchling, 5 ♀♀, 5 ♂♂, coll. vi.1937, em. 14.vii.1937, Cambridge, 9 ♀♀, 1 ♂, coll. 26.viii.1937, em. 20.ix.1937 (*R. L. E. Ford*).

Type deposited in the British Museum.

Host. For the material from which I have here described this species seven hosts are recorded. Elisha's series of three in the Fitch Collection, namely, part of the material referred to by Marshall under the name *A. infimus* Hal., the three females bred by Miles, Ford's series from Cambridge, and all material from Bexley, is recorded to have been bred from the Tineid *Epermenia chaerophyllella* Göze. The three females and two males without other data in the Fitch Collection, Hering's two females, Schütze's four specimens, and both series from Yarmouth, are recorded to have been bred from the Tineid *Acrolepia pygmaeana* Haw. Zimmermann's single female from Bohemia is recorded from the Tineid *Depressaria heracliana* de Geer, Ford's series from Ditchling from *Depressaria nervosa* Haw., and Lyle's single male and Ford's single female from Dartford Heath collected April 24th, from *Depressaria assimilella* Treits. Dr. Scott records that he bred his series from Charlbury from the Tineid *Plutella porrectella* L., and, finally, Ford bred his other single female from Dartford Heath from the Geometrid *Eucestia spartiata* Herbst, now known as *Chesias legatella* Schiff. The two Marshall specimens seem to be without host record, and Benson's two females were swept.

Some of the information with regard to the host-plants of the various hosts that I have recorded above is not without interest, since such information may well ultimately assist towards determining the life-cycle of the *Apanteles*; for, although it can be seen that the *Apanteles* certainly has four broods in the year, its complete life-cycle and how it passes the winter are still unknown. Ford's series from Bexley with emergence date 2.vii.1937 was bred from the first brood of the host, *E. chaerophyllella*. This first brood occurs, Ford tells me, on the underside of the lower leaves of cow parsley, *Heracleum panaces* L., and the host larva and the *Apanteles* cocoons are external. Ford's series from Bexley with emergence date 16.viii.1937 was bred from the second brood of the host. This second brood occurs on the underside of the lower leaves of hogweed, *Heracleum sphondylium* L., and, as before, the host larva and the *Apanteles* cocoons are external. Ford's series from Cambridge with emergence date 20.ix.1937 was bred from the third brood of this same host, which sometimes occurs, and on the same plant as the second brood. One of the other hosts of this *Apanteles* also feeds on hogweed, namely *Depressaria heracliana*. In this case, I understand from Ford, the host larva feeds in a mass in the blossom of the plant, and the *Apanteles* cocoon is to be found in this mass. *Depressaria assimilella*, on the other hand, occurs on common broom, *Cytisus scoparius* Link, and draws together some three or four upper shoots to form a tube, in which it lives and in which the *Apanteles* cocoon is to be found; while *D. nervosa*, on the Hemlock water dropwort, *Oenanthe crocata* L., although it feeds on the blossom, pupates inside a hollow stem of the plant, and the *Apanteles* cocoon occurs inside this hollow stem. The host *Acrolepia pygmaeana* occurs on Bittersweet nightshade, *Solanum dulcamara* L., and the *Apanteles* cocoon is found inside the leaf-blister made by the host-larva. In the case of

Plutella porrectella, which feeds on Sweet rocket, *Hesperis matronalis* L., the *Apanteles* cocoon occurs inside the thin, reticulate puparium of its host. Finally, I must remark that the Geometrid host, *E. spartiata*, a record that might possibly have been queried, and one that Ford is sure is accurate, is another species that occurs on broom.

Cocoons white.

Commentary. This species was considered by Marshall to be *infimus* Hal., and so referred to by him. It is not *infimus*, as I have just shown, and neither is it referable, I am convinced, to any other described palaearctic species, by far the greater majority of the types of which are known to me and have been studied by me for the monograph of this genus I have in preparation. In Muesebeck's key (1920) of the Nearctic species, which must be considered, *imperator* will run apparently only so far as couplet 45, and no further. In my own key (1932, *Trans. ent. Soc. Lond.* **80**, and as subsequently emended and enlarged) it runs in Group U to couplet 124, which should be altered as follows :—

124. Wings infumated; stigma uniformly opaque; Europe . *imperator* Wilkn.
Wings hyaline; stigma discally hyaline . . . . . 124a.
124a. [as existing 124]

In Group S, in which also, I think, it is advisable to include it, the species runs easily to couplet 195, which should be altered as follows :—

195. Wings infumated, even strongly so; carinae of areola and costulae comprised of two or three or more carinulae, giving a rugose effect . 195a.
Wings not or hardly infumated; carinae of areola and costulae strong . 196.
195a. Mesonotum with closely placed, quite strong punctation (degree 3 or 3–4); hind coxae above apparently entirely smooth; 2nd suture apparently wanting; Uganda . . . . . *atellae* Wilkn.
Mesonotum minutely punctate (degree 2); hind coxae basally above strongly punctate (degree 3 or 3–4); 2nd suture strongly marked; Europe . . . . . *imperator* Wilkn.

THE IDENTITY OF *CHOPARDINA IMPORTATA* UVAROV, 1921 (ORTHOPTERA, GRYLLACRIDIDAE)

By B. P. Uvarov, D.Sc., F.R.E.S.

In 1921 I described (1921, *Ent. mon. Mag.* **57** : 206) a new genus and species of wingless long-horned grasshopper from a single specimen taken in a greenhouse at Richmond, Surrey, and named it *Chopardina importata*, as its exotic origin was beyond doubt.

Karny (1937, *Gen. Insect.* **206** : 254) has relegated *Chopardina* as a synonym of the genus *Dolichopoda* Bolivar, 1880, comprising a number of species living in caves of the Mediterranean region. My chief reason for regarding *Chopardina* as distinct generically from *Dolichopoda* was the presence of series of spines on the underside of posterior femur. These spines are absent in all species of *Dolichopoda* with the single exception of *D. bormansi* Brunner, 1882, in which posterior femora are strongly spinose. At the time of my description of *Chopardina* no specimens of *D. bormansi* were in the British Museum collection, but since then several have been received, and a direct comparison proves that *Chopardina importata* Uvarov, 1921, is a pure synonym of *Dolichopoda bormansi* Brunner, 1882 (**syn. n.**).

It is of interest to record that *D. bormansi* is found only in a few caves in Corsica, and the specimens described as *Chopardina importata* must have been brought into this country with some plants taken at least near the caves.

NOTES ON ALYSIINAE WITH DESCRIPTIONS OF THREE NEW SPECIES (HYM., BRACONIDAE)

By G. E. J. Nixon, B.A., F.R.E.S.

(*Imperial Institute of Entomology.*)

Names have been specially requested for a species of *Phaenocarpa* parasitic on *Chaetodacus passiflorae* (Frogg.) in Fiji and for a species of *Aphaereta* parasitic on *Chortophila brassicae* (Bouché) in Morocco. Both these insects are described below as new. The description of the *Aphaereta* is accompanied by brief notes on the three other species of the genus known to me to occur in Europe.

Aphaereta Förster.

This genus presents a difficult taxonomic problem. It seems that the species show a considerable range in habit, though in appearance they are extremely similar. For example, the females of *Aphaereta* seek their hosts in such diverse media as decaying seaweed, carrion, excrement and the tissues of certain cruciferous plants, and for parasitisation they are now known to select hosts from among at least three families of Diptera, namely, Coelopidae, Calliphoridae and Anthomyiidae. With the notable exception of *Alysia manducator* (Panz.), very little work seems to have been done on the biology of the Alysiinae. It still remains, therefore, to discover how far host-selection is an indication of specific identity.

In trying to discover how many species were represented in the European material which I have studied, I found myself confronted with one of those rather too numerous problems in systematics which tax both patience and powers of observation. The results of this investigation are summed up in the following key.

Key to European species of *Aphaereta* (♀♀).

1. Antennae with 24–26 segments, rarely with as few as 23 and then the funicle is pale basally and very slender; at least first 2–3 funicular segments markedly rufescent or yellowish. (Notauli usually well defined) . . . 2.
   Antennae exceptionally with as many as 23 segments (large examples of *A. minuta* (Nees)), usually 19–20; only scape and pedicel yellowish or reddish or pale only in part; hence the funicle virtually black throughout. (Notauli virtually absent) . . . . . 3.
2. Outer hairs of middle third of hind tibia clearly shorter than the width of the tibia here; claws (for the genus) not slender (fig. 2, c). (Large, very black species, about 3 mm.; legs deep reddish; wings with a strong brownish-yellow tint, the veins decidedly thick; notauli deeply impressed throughout, crenate) . . . . . *major* (Thomson).
   Outer hairs of the middle third of the hind tibia not at all shorter than the width of the tibia here; claws slender (as in fig. 2, d). (On the whole a smaller species than *major* Thom., about 2·5 mm.; dark brown; notauli often well defined, though apparently never so sharply as in *major*; funicle very slender, its 2nd segment slightly but usually distinctly bent at base and the basal segments considerably paler than the more apical ones; legs predominantly yellowish) . . . . . *tenuicornis* sp. n.
3. Larger, stout species, 2·5–2·7 mm. (without ovipositor); legs more hairy . . 4.
   Smaller, slender species, about 2 mm.; legs less hairy. (At least the coxae, trochanters and femora showing a well-marked yellowish tint. Anthomyidae on cruciferous plants) . . . . . *difficilis* sp. n.

4. Legs yellowish. (Calliphoridae in carrion) . . . . . *minuta* (Nees).
Legs brownish. (Coelopidae in decayed seaweed)
minuta var. *cephalotes* (Hal.).

Fig. 1.—a, *Aphaereta tenuicornis* sp. n., antennae of ♀; b, *Aphaereta minuta* var. *cephalotes* (Hal.), antenna of ♀; c, *Aphaereta major* (Thomson), antenna of ♀; d, *Aphaereta major* (Thomson), first three funicular segments of ♀; e, *Aphaereta minuta* var. *cephalotes* (Hal.), first three funicular segments of ♀; f, *Aphaereta tenuicornis* sp. n., first three funicular segments of ♀.

Aphaereta major (Thomson).[1]

Aphaereta cephalotes (Hal.), Marshall, 1891, var. 1, *Spec. Hym. d'Eur. d'Alg.* **5 : 401.**
Alysia major Thomson, 1895, *Opusc.* **20** : 2290.
Aphaereta major Marshall, 1897, *Spec. Hym. d'Eur. d'Alg.* **5** bis : 242 *nec* Thomson, (synonymy confirmed).

[1] *A. major* Marshall was described without Marshall knowing of Thomson's *A. major* for the same species.

In addition to the details given in the key, this species, which, incidentally, is the most distinct of all the European species, is further characterised as follows :—

♀. Antennae thick (fig. 1, c, d), becoming submoniliform towards the apex; base of the funicle suffused with dull reddish and of the same colour as the scape and pedicel. Mandibles dark, the middle tooth very narrowly pointed, more so than in the other species; between the upper and middle tooth, there is a distinct cleft (this character may be of doubtful value). Second cubital cell of the fore-wing very strongly narrowed distally, more so than in *A. difficilis* sp. n. (cf. fig. 3, b). Claw of hind tarsus (fig. 2, c).

♂. The antennae may have as many as 28 segments.

England : Cornwall, Botusflemming, 1 ♂ (*Bridgman coll.*); Surrey, Byfleet, 1 ♂, 14.v.1932 (*G. Nixon*); Gloucester W., Staunton, 1 ♂, 5.vi.1936 (*E. B. Britton & J. F. Perkins*). Ireland : Kildare, Sallins, R. Liffey, 2 ♀♀, 17.v.1933 (*A. W. Stelfox*); W. Mayo, Annagh, the Mullet, 1 ♂, 20.vi.1936 (*A. W. S.*); Wicklow, Raheen, 1 ♂, 14.v.1937 (*A. W. S.*). Scotland : Inverness, Aviemore, 3 ♀♀, 1 ♂, 1–11.vi.1934 (*R. B. Benson*); Moray, Grantown, 1 ♀, 8.vi.1934 (*R. B. B.*). Sweden (recorded by Thomson).

This appears to be a rare species, though of wide distribution in the British Isles.

Aphaereta tenuicornis sp. n.

I am confident that, under this name, I have gathered together the elements of a species distinct from the others mentioned in this paper. Owing to the lack of material and the great variability in the size of the individuals, I am unable to define the limits of the species with as much accuracy as I should like.

In addition to the characters given in the key, the species may be further diagnosed as follows :—

♂♀. Dark brown. Posterior part of the mesonotum sometimes showing a slight suffusion of red (1 ♂, Nunton, *Bridgman coll.*); legs, on the whole, clear reddish-yellow; in small examples, slightly dingy. Abdomen of the male (Germany) sometimes entirely reddish and contrasting with the darker head and thorax; petiole frequently reddish.

Antennae of the ♀, 23–28-segmented (usually 24–25) (fig. 1, a, f); of the ♂, 25–27; one small male which I refer to this species has only 22 segments; in large individuals of both sexes, the bend at the base of the 2nd funicular segment is characteristic, but in smaller, more fragile-looking individuals, this character is less easily discernible. Claw of hind tarsus (fig. 2, d). Ovipositor sheaths of the ♀ clearly a little longer than the abdomen, both being measured in a lateral view.

Length : ♂♀, 2·4–2·6 mm. (without ovipositor of ♀).

England : Devon, Exmouth, 1 ♀ (*Bignell coll.*); Hants, Brockenhurst, 22–26.viii.1932, 1 ♀; 25–30.vi.1933, 1 ♀ (*G. Nixon*); Surrey, Ashtead, 30.viii.1931, 1 ♂; Wisley, 18.vi.1932, 1 ♂ (*G. N.*); Sussex, East Hoathley, 11–19.vi.1932, 1 ♀ (*the type*) (*G. L. Lockley*). Germany : 5 ♂♂, 5 ♀♀ (*Ruthe coll.*). Ireland : taken by A. W. Stelfox as follows : Cavan, Farrinseer, 10.ix.1933, 1 ♂; Kildare, Bryanstown, 4.viii.1937, 2 ♀♀; Leitrim, Tullaghan, 4.vii.1936, 1 ♂; Longford, Castle Forbes, 19.viii.1933, 1 ♂; Wexford, Curracloe, 23–29.vii.1937, 1 ♂, 3 ♀♀; Wicklow, Glencullen, 28.viii.1935, 1 ♀; Glenmacnass, 17.vi.1932, 1 ♂. Type in the British Museum.

Aphaereta difficilis sp. n.

♂♀. Dark brown; mandibles and propleura paler, reddish-brown. Legs obscure honey-brown, the tarsi darkened. Antennae black with the scape and pedicel same colour as the legs.

♀. *Head*, seen from above, widest at the cheeks and here slightly wider than the width across the eyes; compared with width of thorax (across tegulae) as 14 : 17. Face virtually

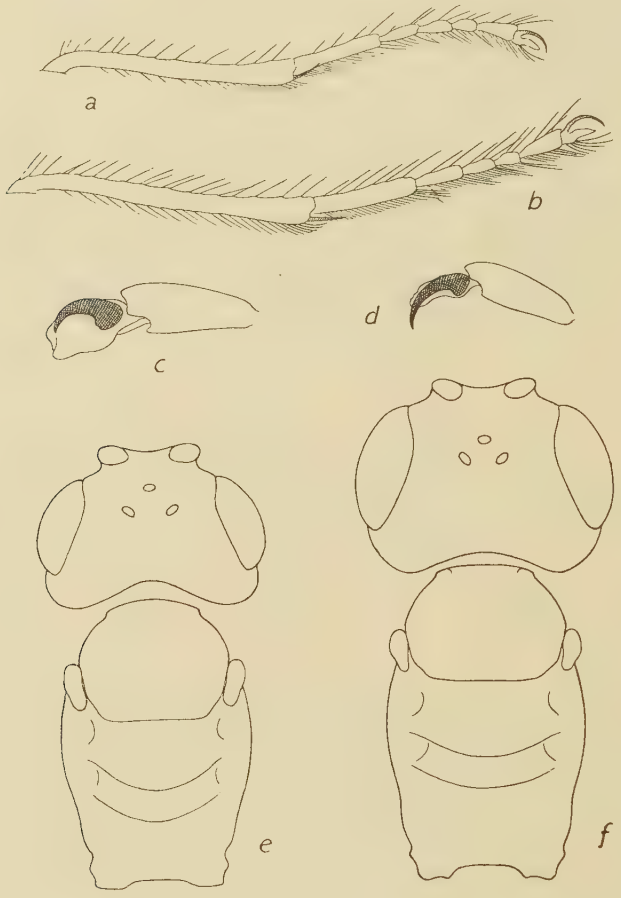

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Fig. 2.—a, *Aphaereta difficilis* sp. n., ♀, hind tibia and tarsus; b, *Aphaereta minuta* var. *cephalotes* (Hal.), ♀, hind tibia and tarsus; c, *Aphaereta major* (Thomson), ♀, claw of hind tarsus; d, *Aphaereta tenuicornis* sp. n., ♀, claw of hind tarsus; e, *Phaenocarpa leveri* sp. n., ♀, head and thorax; f, *Phaenocarpa bactrocerae* Gahan, ♀, head and thorax.

smooth, covered with short fine hairs; rest of head smooth, polished and virtually glabrous. Clypeus shining, with only a trace of sculpture. Eyes small, with a very few short, quite inconspicuous hairs. Mandibles with 3 clearly defined teeth, the middle one by far the longest; no trace of a cleft between the upper and middle tooth. Antennae with usually 20 segments (10 ♀♀); in 2 ♀♀, 19-segmented; funicle shining, segments 1 : 2 as 5 : 7; first 4 funicular segments together exactly equal to length of hind tibia. *Thorax* virtually

glabrous, polished and with hardly a hair. Notauli virtually wanting but indicated anteriorly by short grooves which have lateral direction with perhaps a trace of longitudinal direction. Propodeum with a short basal carina and two longitudinal carinae which fork from it and enclose a narrow subparallel area; costulae present but not well defined; surface posterior to their surface with a few feeble, raised rugosities; dorsal areas of the propodeum, on the whole, smooth and shining. Mesopleura smooth except for the furrow, which has a variable amount of crenulation. Wings: (fig. 3, b). Legs: hairs of outer side of middle third of hind tibia fully as long as the width of the tibia here; claws very slender (fig. 2, a). *Abdomen*: Petiole slightly longer than wide, irregularly, longitudinally striated; the two usual carinae which originate at the basal corners of the petiole extend close together to apex, and in some individuals tend to be more prominent than the surrounding striae. Ovipositor sheaths a little longer than the length of the hind tibia.

Length: ♂♀, about 2 mm. (without ovipositor of ♀).

Morocco: Fieuzet, 10 ♀♀ (one the type), bred 12 & 20.xii.1937 from *Chortophila brassicae* (Bouché); Rabat, 1 ♂, 2 ♀♀, bred x.1935 from *Paregle radicum* (Linn.) on radish and turnip (*P. Regnier*). Type in the British Museum.

This species is very closely allied to *A. minuta* (Nees) and I have been able to separate the two species only on small differences of degree: smaller size, less robust build and slightly shorter, slightly sparser vestiture of the legs and antennae seem to provide the only morphological justification for regarding *A. difficilis* as distinct from *A. minuta*. On the other hand, when these differences are taken in conjunction with the rather wide dissimilarity in habits, there seems to be better reason for at least a provisional separation.

Aphaereta minuta (Nees).

Stephanus minutus Nees, 1811, *Berl. Mag.* **5**: 5 (no. 3, ♂).
Alysia cephalotes Haliday, 1833, *Ent. Mag.* **1**: 265.
Alysia fuscipes Nees, 1834, *Ichneum. Aff.* **1**: 254.

The above synonymy is in accordance with that given by Marshall, though, for reasons not stated, he used the name *cephalotes* Hal., instead of *minuta* Nees for the species in question. In establishing this synonymy, Marshall evidently did not take into account the range of habit developed within the genus, and at the time of writing his monograph on the British Braconidae believed that only one species of *Aphaereta* occurred in Britain. Nees himself sunk his own *Stephanus minutus* under his *Alysia fuscipes*, suppressing the earlier name *minutus* because he had described actually within *Alysia* a species which he called *minuta*. Both these Neesian names referred to forms of *Aphaereta* taken inland and their types are known to be lost.

Haliday's *Alysia cephalotes* is clearly not a homogeneous segregate, though it seems probable that he intended the name chiefly for the maritime form which occurs in decayed seaweed.

In order to be consistent with Marshall's synonymy, for he was first reviser, and at the same time to emphasise the difference in biology, I am restricting the name *minuta* to the form of *Aphaereta* parasitising carrion-infesting Diptera, and am calling the form which occurs in the seaweed "*Aphaereta minuta* var. *cephalotes* (Hal.)." Both forms are so alike that I am able to separate them only on trifling differences of colour and then only in a part of the specimens.

England: Cambridge, 7 ♀♀, 1 ♂, bred from *Calliphora erythrocephala* Mg. (*Graham Smith*); France: Lyon-Les Massues, 12 ♀♀, 4 ♂♂, bred 27.viii.1917

from the carcase of a small mammal (*P. Riel*); GERMANY: 12 ♀♀ (*Ruthe coll.*) (these females are referred only provisionally to *A. minuta* (Nees)).

Evans (1933) has bred this species from two genera of carrion-infesting Diptera: *Calliphora* and *Lucilia*. According to him, the parasite is gregarious, the female laying from ten to fifteen eggs in a host-larva.

In the Bignell collection is a card of 5 females, which Bignell says were bred from excrement. I can find no difference between them and typical females from carrion.

Aphaereta minuta var. *cephalotes* (Hal.).

This is the common form of *Aphaereta* found amongst decaying seaweed on the sea-shore of the coasts of Britain. The only record of its having been bred is as follows: Dorset, Osmington, 2 ♀♀ bred 19.x.1912 (pupae of host found 22.ix.1912) from the dipteron *Orygma luctuosum* Meig. (see 1916, *Ent. mon. Mag.* **52**: 206). Lyle does not state whether the parasites were bred singly or together.

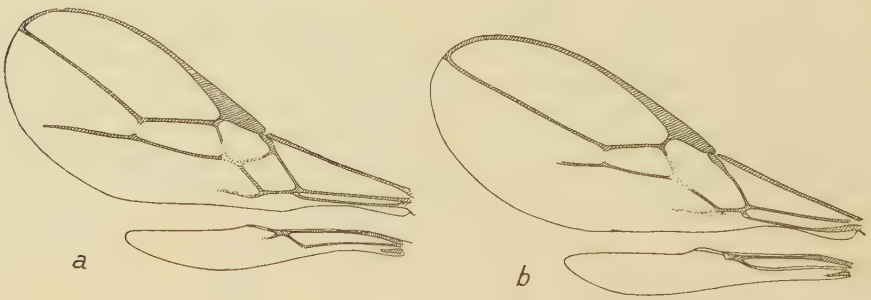

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FIG. 3.—Wings of: a, *Phaenocarpa leveri* sp. n., ♀; b, *Aphaereta difficilis* sp. n., ♀.

Although I can find no structural difference between this form and typical *A. minuta* (Nees) from carrion, I am retaining for it Haliday's name "*cephalotes*" in order to emphasise the difference in breeding habits. It is possible that a more exhaustive examination of the two forms may reveal differences which I have been unable to detect; this is all the more likely since those characters which I have already recognised as valid for separating species are slight and not easy to appreciate. Antennae (fig. 1, b, e). Hind tibia and tarsus (fig. 2, b).

Phaenocarpa Förster.

Phaenocarpa leveri sp. n.

♂♀. Brown, suffused with paler colouring, light rufous, especially on cheeks, pronotum, propleura and sometimes mesonotum. Mandibles and clypeus pale like the paler parts of the body. Antennae: first 5 or 6 segments yellow-testaceous, then darkening to brown; apical 6 or 7 segments white; in the one male available, the apical segments of the antennae are not contrasting white, the last 2 or 3 segments appearing merely somewhat greyish. Legs pale honey-yellow; coxae and trochanters sometimes showing a whitish tint. The vertex is divided by a dark, subintegumentary line extending from the ocellar region to the occiput; owing to the dark colour of the head, this line is not conspicuous as in *P. bactrocerae* Gahan.

♀. *Head* not much wider than the greatest width of the thorax (fig. 2, e). Face completely smooth, covered with short, more or less erect hairs; rest of head polished and virtually glabrous. Mandibles with 3 clearly defined teeth, the upper one the largest, truncate at apex; the middle one the longest, narrowly triangular. Clypeus transverse, 3–4 times as wide as long. Antennae 23-segmented (2 ♀♀); in *P. bactrocerae* Gahan, 26-segmented; funicle very shining, clothed with semi-erect hairs which are slightly longer than the width of the segments; funicle 1 to 2 as 5 : 8. *Thorax* (fig. 2, e): Mesonotum smooth, polished; a short, linear fovea posteriorly. Notauli wanting, their imaginary course marked by a row of short, well-spaced hairs. Propodeum with a short, basal carina which forks into two fine carinae; these latter carinae enclose a narrow, subparallel-sided area, which extends over about two-thirds the middle length of the propodeum; no costulae present; surface otherwise, polished. Mesopleura smooth except for the feebly crenate furrow. Wings: (fig. 3, a) stigma of fore-wing merging gradually into the metacarp; hence point of emission of radius in relation to length of stigma not definable but clearly a little nearer to base than in *P. bactrocerae* Gahan; submedian cell of the hind-wing not complete. Legs somewhat thick, clothed with short, bristle-like hairs which are a somewhat conspicuous feature of the tarsi; claws long, very slender, slightly longer in proportion to the length of the apical tarsal segment than in *P. bactrocerae* Gahan. *Abdomen*: Petiole only very slightly shorter than its apical width on actual measurement, though appearing longer (in the ♀ paratype of *P. bactrocerae* Gahan compared, the petiole is longer, about 7 : 5); the two carinae converge to a point near the apical margin; they are not much raised, less so than in *P. bactrocerae* Gahan, and the surface between them is feebly rugose; the surface lateral to the carinae virtually smooth. Full length of ovipositor equal to 1½ times the length of the hind tibia; the merest trace of notch before apex; sheaths about two-thirds as long as the abdomen, clothed with long, not close, bristles.

♂. Antennae with 27 segments (1 ex.).

Length: ♂♀, 1·8 mm., approx. (including ovipositor of female).

Fiji Is.: Colo-i-Suva, 3 ♀♀ (one the type), 1 ♂, bred 23.iii.1938 from *Chaetodacus passiflorae* (Frogg.) (*R. A. Lever*).

Through the kindness of the authorities of the United States National Museum and especially of Dr. C. F. W. Muesebeck of the United States Bureau of Entomology, I have been able to examine a paratype female of *Phaenocarpa* (*Asobara*) *bactrocerae* Gahan. This species clearly belongs to the same species-group as *P. leveri* sp. n., in my opinion, and is closely related to it. The most obvious structural differences between the two species are the shape of the head and its width in comparison with that of the thorax (fig. 2, f) and the length of the ovipositor; the latter is much shorter in Gahan's species; its sheaths are more irregular in outline, somewhat expanded before the apex and beset with longer bristles. To the naked eye, *P. bactrocerae* Gahan is yellowish-red while *P. leveri* sp. n. has a dark brown appearance.

References.

Evans, A. C., 1933, "Comparative observations on the morphology and biology of some hymenopterous parasites of carrion-infesting Diptera," *Bull. ent. Res.* **24**: 385–405, 12 figs.

SOME AFRICAN SPHAEROCERIDAE (BORBORIDAE) IN THE COLLECTION OF THE BRITISH MUSEUM (DIPTERA)

By O. W. Richards, F.R.E.S.

Owing to the kindness of Miss D. Aubertin (Mrs. Dinely) and later of Dr. J. Smart of the Department of Entomology, British Museum (Natural History), I have lately had the opportunity of examining all the unidentified African Sphaerocerid flies in the Museum collection. These are recorded and where necessary described in the following paper.

Leptocera Olivier, 1813.

Subgenus *Leptocera* s.s.

Leptocera curvinervis (Stenhammar, 1854).

Cape Province 7 ♀♀, 2 ♂♂ (*R. E. Turner*) : Mossel Bay, v.1932, Worcester, i.1934, Somerset East, xi.1930 and i.1931, Swellendam, i.1933 ; Natal : Weenen, 1 ♀, v.1934 (*H. P. Thomasset*).

This species has already been recorded by Duda (1925 : 50) from Europe, Java, New Guinea, Ceylon and various parts of Africa.

Leptocera kovácsi (Duda, 1925).

Abyssinia : Djem-Djem Forest, *c.* 8000 ft., 1 ♂ (probably this species) 23.iv.1926 (*Hugh Scott*). Duda (1925 : 56) described this species from Abyssinia and the above male agrees closely with the original description.

Subgenus *Rachispoda* Lioy, 1864.

Leptocera acrosticalis (Becker, 1903).

Bechuanaland : Mafeking, 1 ♀, 27.ii.1934 (*J. Ogilvie*). Duda (1925 : 46) describes a number of forms with different types of male genitalia which he groups under the above name. The female in the British Museum collection corresponds to one of these males.

Leptocera scotti sp. n.

Male. Dull greyish-black, trochanters lighter, halteres pale yellow, wings a little brown-tinged. Length 2 mm.

Strong jowlar bristle more than half as long as vibrissa ; facial " knob " little developed ; arista nearly three times as long as antenna with rather long pubescence ; three pairs of rather weak interfrontal bristles. Mesonotum with 2 + 3 pairs of dorsocentrals, the anterior pair convergent, a pair of strong acrostichals (separated by microchaetes) in front of suture, and one acrostichal just behind it ; scutellum a little longer than broad, surface, except at base and down central line, covered with short bristles, margin with three pairs of strong bristles, with a further subapical pair shorter than the others (about half as long as the apicals) and on each side two very minute bristles, one at base and one (not quite on margin) between first and second strong bristles ; sternopleuron with one very strong bristle and a smaller one in front of it. Wing with second costal sector more than twice as long as third, R_{4+5} rather strongly bent, posterior outer corner of cell angulated. Mid femur with a short, stout, thorn-like bristle ventrally at base (about one-third as long as diameter of femur) ; mid tibia in basal third dorsally with a pair of small bristles and below them two

stronger bristles which are nearly paired, just below the mid point of tibia with three strong bristles (central one the biggest) with two small ones above them, ventrally tibia with no bristles but at apex with rather dense pubescence including a thorn-like projection like that on femur; basitarsus a little shorter than the second segment, with a long ventral bristle. Hind tibia with short dorsal, bristle-like pubescence; second tarsal segment not thickened, twice as long as first. Abdomen dull grey, after first tergal plate (= I + II), tergites short and of diminishing length, only fourth and fifth with a long lateral bristle; genitalia rather large, anus small and narrow, pubescence longer below, but nowhere very conspicuous; outer forceps somewhat dorso-ventrally enlarged, produced below into short, black, backwardly directed hooks, aedeagus visible as a long, slightly curved, median rod (longer than third segment of hind tarsi); fifth sternite at apex thickened and emarginate, with short woolly pubescence.

Type ♂ Abyssinia: Mt. Chillálo, moorland *c.* 12000–13000 ft., 21.ix.1926 (*Hugh Scott*).

This species runs down to *L. acrosticalis* (Becker) in Duda's key, but differs in having more numerous scutellar marginal bristles, modified mid tibiae and femora, and different genitalia.

Subgenus *Opacifrons* Duda, 1918.

Leptocera coxata (Stenhammar, 1854).

Abyssinia: Djem-Djem Forest, from river bed, *c.* 8000 ft., ♂, 2.x.1926 (*Hugh Scott*).

A widespread species already recorded from Abyssinia by Duda (1925 : 70).

Subgenus *Chaetopodella* Duda, 1920.

Leptocera cursoni sp. n.

Female. Dull velvety-black; jowls, face and small transverse area above antennae dirty yellow-brown; thoracic pleuron dull grey-brown, legs brown, wings milk-white, halteres yellow; abdominal sterna largely yellow-brown; larger bristles of head and thorax all rising from small grey spots. Length 1·5–1·75 mm.

Head on each side with one rather short vibrissa and one jowlar bristle about half as long; facial "knob" small, very little prominent; antennae divergent, third segment pyriform, arista about four times as long as antennae with rather short pubescence; head bristles normal, about three pairs of interfrontals decreasing in size forwards, anterior of the two outward and backward curving superior orbitals half the size of the other, which is a little smaller than the inward and backward curving one; grey marks at bases of bristles fusing to form narrow grey lines along orbits and interfrontals. One strong, one moderate and one weak humeral bristle, behind the suture three pairs of rather strong dorsocentrals, acrostichals somewhat widely spaced, between the dorsocentrals four rows in front and two behind; sternopleuron with one rather strong bristle and one weak one anteriorly; scutellum as long as broad, with four bristles, apical pair more than twice as long as scutellum. Wings with veins hyaline, first sector of costa with a pair of rather long bristles at base, beyond this also with rather longer bristly hairs than usual, second sector one and two-thirds times as long as third, costa not produced beyond R_{4+5}, ending well before wing-tip; R_{2+3} nearly straight, distal part very little curved on to costa; R_{4+5} with base of last section straight, distal part rather strongly curved on to costa; cell rather narrow, M_{1+2} produced as a hyaline vein almost to margin, M_{3+4} hardly produced beyond cell, cross-vein *im* short, less than half as long as distance along M_{1+2} to cross-vein *r*; rudimentary anal vein regularly diverging from M_{3+4}; alula rather large and rounded. Fore

femora with three or four long postero-dorsal bristles on apical half; fore tibia without bristles; fore tarsi considerably longer than tibia, basitarsus nearly as long as next three segments together. Mid trochanter with a rather long bristle lying along the femur; mid femora with complete row of short, stout, antero-dorsal bristles and, at apex, a posterior bristle; mid tibiae dorsally with a pair of small bristles at $\frac{1}{4}$, just below them another pair of which the anterior bristle is large, twice as big as posterior one (which is set a little lower), tibia at $\frac{3}{4}$ with a pair of large bristles, the anterior one surmounted by a small one, ventrally with a median and an apical bristle, at apex with a moderately long anterior and posterior bristle; mid tarsi fully one and a half times as long as the tibia, basitarsus as long as the next three segments together, with a long median ventral bristle and four moderately long apical bristles. Hind femora without bristles except an anterior one at apex; hind tibiae without bristles but with rather sparse outstanding pubescence nearly as long as the diameter of tibia; hind tarsi with second segment not thickened, more than twice as long as first. Abdomen with all tergites with long bristles at sides, genito-anal cavity transverse, closed above by a small plate bearing short hairs and two long woolly ones; first sternal plate (= I + II) large and dark, remainder of sternites and the broad lateral connecting membrane bright yellow, the sternites with short black bristles.

Male. Mid tibiae a little curved over apical third, with or without mid ventral bristles (2 with, 3 without); genitalia small, with a pair of long bristles on each side of the subcircular anal cavity; outer forceps not clearly visible, but in ventral view widely separated.

Type ♀ Zululand: Nagana Res. Lab., from drinking place of cattle, 8.vi. 1922 (*H. H. Curson*). Allotype ♂ and 3 ♂♂, 8 ♀♀ paratypes with the same data; further paratypes Zululand: Umfolosi R., on dung of Rhino, 1 ♂, 1 ♀, vi.1922 (*H. H. Curson*). In Duda's key (1925 : 145) this species runs down to *L.* (*C.*) *pulchripes* Duda, 1925 of Paraguay, but that species has white hind tarsi, the anterior superior orbitals of equal size and the distal part of R_{4+5} nearly straight.

Subgenus *Poecilosomella* Duda, 1925.

Leptocera longecostata Duda, 1925.

Abyssinia: Djem-Djem Forest, 8000–9000 ft., 1 ♂, 3 ♀♀, 21.ix. to 1.x.1926 (*Hugh Scott and J. Omer Cooper*); East Cape Province, Katberg, 4000 ft., 1 ♂, 1 ♀, xi.1932 (*R. E. Turner*).

The species was previously recorded by Duda (1925 : 92) from Abyssinia, S. Nigeria, E. Africa, S. Kamerun, and Togo.

L. pallidimana Duda, 1925.

Cape Province, Somerset East, 1 ♂, 2 ♀♀, xi.–xii.1930 (*R. E. Turner*). Previously recorded by Duda (1925 : 85) from a single male captured in Abyssinia. The female resembles the male in all respects; seventh tergite with a central keel; cerci each with two woolly hairs.

L. angulata (Thomson, 1868).

S. Africa: French Hoek, 40 m. from Cape Town, 1 ♂, xi.–xii.1930 (*H. W. Simmonds*); Cape Province: Mossel Bay, 1 ♂, vi.–vii.1930 (*R. E. Turner*); Abyssinia: Djem-Djem Forest, 8000–9000 ft., 1 ♀, 21–29.ix.1926 (*Hugh Scott*); Abyssinia: Djem-Djem Forest, nearly 9000 ft., 1 ♀, 1.x.1926 (*Hugh Scott*). The last recorded female is somewhat abnormal. The mesonotum instead of being black is dark, bronzy-brown with light silvery-grey spots, partly outlined

with dark brown. In other characters it agrees with the males. The other female is immature, but it would probably be more like the males when mature.

The species has been recorded by Duda (1925 : 93) from Cuba, Colombia, Brazil, Paraguay, Peru, Madagascar, Abyssinia and E. Africa.

Subgenus *Limosina* Macquart, 1835.

Leptocera mediospinosa Duda, 1925.

Cape Province : Somerset East, 1 ♂, x.1930 (*R. E. Turner*); East Cape Province, Katberg, 4000 ft., 1 ♂, x.1932 (*R. E. Turner*). The species has previously been recorded by Duda (1925 : 182) from Transvaal and Chile.

Copromyza Fallén, 1820.

Subgenus *Gymnometopina* Hedicke, 1923 (= *Gymnometopa* Duda *nec* Coquillet).

C. clunicrus Duda, 1923.

Natal : Weenen, 1 ♂, vi.–ix.1927 (*H. P. Thomasset*). Previously recorded by Duda from Madagascar, E. Africa (Kilima-Njaro) and Abyssinia.

Subgenus *Borborillus* Duda, 1923.

C. sordida Zetterstedt, 1847 var. **hypopygialis** var. n.

Duda (1933) has already described, from Abyssinia and E. India, a variety *tropicus* of this species. He differentiated the variety by means of slight differences in colour and hairiness. The form described below seems to be rather similar to Duda's variety, but there is a marked difference in the form of the male genitalia, which is not referred to in his description. For the present, therefore, I must describe it as distinct. The females, as far as I can see, are identical with European specimens.

Exactly like *C. sordida* Zett. as described by Duda (1923) but male genitalia a little different : outer forceps triangular, not narrowed at tip, dull with a very short black tip (in *C. sordida* Zett. narrowed suddenly just before tip and produced into a shining black, parallel-sided process); another pair of finger-shaped processes curve backwards (*i.e.* dorsally) and are shining black (in *C. sordida* Zett. these processes are shorter and broader and dull grey); a third triangular process is foot-shaped, shining brown and curves forwards (*i.e.* ventrally) (in *C. sordida* Zett. the corresponding process is shorter and blunter).

Type ♂ Zululand : Umfolosi R., vi.1922 from Rhino dung (*H. H. Curson*). 6 ♂♂, 10 ♀♀ with the same data.

Subgenus **Femoromyza** subgen. n.

No long jowlar bristle. A pair of small convergent postvertical bristles. No postocular bristles near eye, those that are present being more ventral (posterior). Mesonotum without tomentum and almost without microchaetes. Scutellum with four moderately strong marginal bristles only. No sternopleural bristles. Mid tibia with no row of numerous dorsal bristles. Hind femur thickened and spiny. Hind tibia curved, without an antero-ventral bristle and with no apical ventral spur.

Differs from all other subgenera in the thickened hind femora and in the combination of having four scutellar bristles but no hind tibial spur.

Genotype *Copromyza rhinocerotis* sp. n.

Copromyza (Femoromyza) rhinocerotis sp. n.

Male. Strongly shining black; antennae yellow-brown (in the paratype male and allotype female the vertex becomes yellow-brown on front half); hind coxae yellow; junction of all femora and tibiae, basal fifth of fore tibia, all tarsi, brown; halteres whitish-yellow; wings hyaline. Length 2 mm.

Head with mouth-parts normal, praelabrum rather large; vibrissa long, arising from frontal suture at a point distinctly removed from oral margin; jowls bare except for very short hairs along the oral margin, as broad in front as third antennal segment, very broad behind, lower edge with a distinct raised margin, postero-ventral angle completely rounded; eyes rather small, elongate-oval, long diameter about one and a half times as long as the short one, outline not emarginate; face deeply sunk in, with lower edge of epistoma considerably reflexed, upper part almost forming a cavity to contain the antennae, cavity not divided by a keel, facial "knob" not developed; antennae short, nearly parallel, third segment oval, long axis vertical, arista dorsal, three times as long as the antenna, with very short pubescence; vertex strongly shining, central triangle only feebly defined, very narrow (in centre not as wide as third antennal segment), reaching anteriorly to frontal suture; two pairs of small interfrontals arising a little from edge of middle of central triangle; further bristles on each side are—three superior orbitals, two weak, anterior outwardly directed ones and one stronger inwardly directed one behind—a small ocellar, a small convergent postvertical; postoculars very minute and only found at back of dorsal part of occiput, not near eyes. Mesonotum as broad as head with eyes, subquadrate with rounded angles, convexity and sutures normal; on each side with one weak, one moderate, recurved humeral, one moderate notopleural, two supra-alars (the posterior one strong), one moderate presutural interalar, three dorsocentrals (one in front of scutellum, one just behind suture and one well in front of it), one minute acrostichal between the posterior dorsocentrals; surface without tomentum and without microchaetes except for one in front of each presutural dorsocentral and two on each humeral callus; scutellum about one and a half times as broad as long, subtriangular, with a pair of basal and a pair of apical, moderately long bristles, otherwise bare; mesopleuron strongly shining throughout, without bristles. Fore femora a little thickened, with two dorsal bristles near base, all other bristles confused with the general, semi-erect, moderately long pubescence; fore tibia not thickened, without bristles; fore tarsi as long as tibia, not flattened, basitarsus produced into a small hook ventrally at apex. Mid femur not at all thickened, without bristles; mid tibia with a small antero-ventral bristle at $\frac{2}{3}$ and a ring of small bristles at apex; mid tarsi with first three segments together as long as tibia, basitarsus a little shorter than the next two segments together. Hind femur strongly thickened (three times as thick as mid femur, twice as thick as fore femur), thickest at middle, beneath with two rows of strong spines, the spines of the anterior row starting near base where they are short and widely spaced, of the posterior row starting near middle, both rows becoming long and much more closely placed just before apex—where there are also numerous close very short spines; femur dorsally with only rather short pubescence; hind tibia curved through a right angle at base and weakly curved throughout, with only short pubescence and without an apical ventral spur; hind tarsus without special features, basitarsus with a short ventral bristle at apex, second segment little thickened, one and a half times as long as basitarsus. Wings of the usual *Copromyza* type, costa with a pair of bristles near base, the dorsal one more than twice as long as the ventral one, costa ending at a point a little beyond R_{4+5}, last section between $\frac{1}{3}$ and $\frac{1}{4}$ the penultimate; R_{2+3} nearly straight, moderately bent on to costa at apex; R_{4+5} distinctly curved forwards over its apical quarter; last section of M_{1+2} hardly longer than penultimate, parallel to R_{4+5}; outer posterior angle of cell almost rounded, lying very close to wing-margin, M_{3+4} hardly produced beyond the cell; anal cell extending a little beyond the posterior basal cell; alula long and narrow with a pale fringe. Abdomen

with tergites bare, with bristles only at edges of tergites, surface moderately shining, weakly alutaceous, tergites with a preopical impressed line, one long bristle at sides of segments III, IV and V; first tergal plate (I + II) not very much narrowed anteriorly, not quite twice as broad posteriorly as median length, tergites III and IV subequal and half as long; tergite V not quite as long as II and III together; sixth tergite nowhere visible; first sternal plate (I + II) short, three others subequal and moderately long, smooth and shining with rather sparse pubescence, nearly as broad as the tergites, posterior margin of sternite 5 quite straight and unmodified, bearing about six long bristles; genitalia small with 6–8 outstanding bristles, anal opening circular.

Female. Fore basitarsus without a hook. Hind legs (perhaps as a result of being free from gum) with the femur bearing rows of moderately long ventral and dorsal bristles; hind tibia also with a double dorsal row of outstanding hairs which are a little longer than the diameter of the tibia. Abdomen apparently normal, with all the segments sclerotised but becoming narrow posteriorly; cerci bearing some rather short, woolly pubescence.

Type ♂ Zululand: Umfolosi, vi.1922 "from dung of rhino" (*H. H. Curson*); paratype ♂ and allotype ♀ with the same data.

References.

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THYSANOPTEROLOGICA (VIII)

Von Dr. H. Priesner.

Communicated by Dr. O. W. Richards, F.R.E.S.

Xylaplothrips ulmi sp. n.

♀ (f. brachyptera): Graubraun, rotes Pigment in kleine Flecke aufgelöst im Thorax und Abdomen; Vordertibien zum Grossteil hellgelb, bei dunklen Stücken vielleicht am Aussenrande getrübt, Mittel- und Hintertibien blass graugelb, gegen das Ende lichter, alle Tarsen hellgelb; 1. und 2. Fühlerglied gelbgrau, das 1. am Grunde der Quere nach etwas lichter, das 2. am Ende aufgehellt, 4.–8. Glied einfarbig dunkelgrau, das 3. Glied am lichtesten, aber nicht rein hellgelb, sondern etwa von der Mitte ab unscharf abgegrenzt leicht getrübt.

Kopf seitlich deutlich gewölbt, nach vorn an den Augen etwas stärker verengt als nach hinten; Augen verhältnismässig klein, 39–43 μ lang, bei einer Wangenlänge von 102–106 μ; Kopflänge 146 (samt IAF. 160) μ Breite an den Augen 116, in der Mitte 128 μ; die Ocellen liegen in sehr niedrigem Dreieck, sind mässig gross, innerer Abstand der hinteren 37 μ; Microsetae stehen 1 an den Seiten des vorderen Ocellus, 1 vor und 1 hinter dem hinteren Ocellus, eine weitere dahinter, aber noch innerhalb der Augen; Postokularborsten lang (sicher über 43 μ), farblos, sehr dünn, praktisch spitzig; sie liegen ziemlich weit nach aussen an den Schläfen und sind voneinander etwa 100 μ entfernt; Mundkegel stark abgerundet, kräftig, Oberlippe stumpf; 2. Maxillarpalpenglied 32–34 μ lang, 7 μ breit; Fühler 303 μ lang; Gliederlängen (-breiten): 24 (B. 29, Sp. 22), 45 (27), 38–39 (25), 41 (26), 42–42 (22), 38 (22), 42 (19), 27 (13) μ; 1. Glied aussen etwas konkav, 2. normal, 3. stark konisch, am Grunde dünn, 6. am Grunde dünn, spindelförmig, 8. an das 7. breit anschliessend, ziemlich spindelförmig, 8. regelmässig konisch; 3.–7. Glied mit je zwei dünnen,

spitzen, mässig grossen Sinneskegeln, am 6. ist der äussere schon haarartig. Prothorax wie bei den anderen Arten dieser Gattung mit sehr gut entwickelten Vordereckenborsten, während die inneren rudimentär sind; diese Borsten sind licht, schätzungsweise etwa 28 μ lang und erscheinen spitzig; äussere Hintereckenborsten hell, dünn, lang (71–79 μ), am Ende schmal abgerundet. Pronotum lang, 150–155 μ, hinten bogig, samt Coxen 215 μ, ohne diese 182 μ breit. Vorderschenkel einfach, nicht verdickt, an den Vordertarsen ist die Klaue sehr deutlich, ein Zähnchen vermag ich nicht zu erkennen, es ist aber möglich, das ein sehr kleines solches vorhanden ist. Pterothorax 190 μ breit, schmäler als der Prothorax, Flügel verkümmert. Die Abdominalsegmente sind bei dem einzigen Exemplar eingezogen; Borsten an den Seiten lang und sehr dünn, haarartig scharfspitzig, am 8. Segment 83–87 μ, am 9. Segment, B. 1 : 130 μ (oder mehr), B. 2 genau 154–158 μ lang, haardünn. Tubus dorsal 91, lateral 95 μ lang, am Grunde 55, am Ende 29 μ breit, im Ganzen konisch, aber im basalen Drittel doch ganz leicht geschnürt; die lateralen Analborsten (B. 2 (4)) etwa 235 μ lang.

Fundort: Ungarn: Simontornya, 1 ♀ (Holotype in meiner Sammlung), 21.iii.1924, unter *Ulmus*-Rinde (leg. *F. v. Pillich*).

Seit 1924 hatte ich dieses Exemplar zurückgestellt, hauptsächlich deshalb, weil das Tarsenzähnchen nicht deutlich zu sehen ist. Ich bin aber heute davon überzeugt, dass es in jene schwer zu definierende Uebergangsgruppe zwischen *Haplothrips* und *Hoplothrips* gehört, die von den Amerikanischen Kollegen früher als *Zygothrips* bezeichnet wurde; der Typus der Gattung *Zygothrips* Uzel ist hingegen ein echter *Haplothrips* der *subtilissimus*-Gruppe, der nur durch den kurzen Kopf und den Mangel der Sinneskegel am 3. Fühlerglied, ferner die Färbung ausgezeichnet ist. In Europa ist eine Form (*Haplothrips fuliginosus* Sch.) häufig, die ich wegen des symmetrischen 3. Fühlergliedes, den Besitz von nur 2 Sinneskegeln am 4. Glied und wegen des *Hoplothrips*-artigen Habitus unter dem Namen *Xylaplothrips* (als Subgenus von *Haplothrips*) abgetrennt hatte. Ich finde aber, dass diese Form eigentlich der Gattung *Karnyothrips* näher steht; das Tarsenzähnchen, obwohl kleiner als bei *K. flavipes* (Jones), dem Typus der Gattung *Karnyothrips* Wats. (da *K. weigeli* Wats. = *Anthothrips flavipes* Jones), ist ebenso schräg nach vor gerichtet, wie es für *Karnyothrips* characteristisch ist (s. Hood, 1927, *Pan Pac. Ent.* **3**: 175–178, fig. 1). *Xylaplothrips* kann von *Karnyothrips* nur durch die schwachen Schenkel und das kleine oder verkümmerte Tarsenzähnchen unterschieden werden, im Habitus stehen diese beiden Gruppen einander aber näher als *Haplothrips* s.str.

Zu *Karnyothrips* gehören sicher die folgenden Arten: *K. flavipes* (Jones), typ. gen.; *K. cameroni* Pr.; *K. dodgei* (Hood); *K. melaleucus* (Bagn.); *K. ochropezus* Hood; *K. rhopalocerus* (Hood); *K. ripicola* (Pries.) (= *Trichothrips ripicola* Pr.). *Cephalothrips errans* Moult. ist ein Synonym von *K. flavipes* (Jones). Ueber die Arten *K. fuscipennis* Mlt. und *K. nigriflavus* Ram. vermag ich vorläufig nicht zu urteilen.

Zu *Xylaplothrips* gehören: *X. fuliginosus* (Schille), typ. gen.; *X. americanus* (Hood) (früher *Zygothrips*); *X. fungicola* (Pr.) (früher *Haplothrips*); *X. harti* (Hood) (früher *Zygothrips*); *X. subterraneus* Pr.; *X. ulmi* sp. n.

Die neue Art, *ulmi*, kommt dem *americanus* Hood (den ich durch Herrn Dr. Floyd Andre (Washington) erhielt) am nächsten und ist ihm in der Färbung, Fühlerbildung und durch die langen Borsten am Abdomenende sehr ähnlich. Die Analborsten sind aber bei *ulmi* noch länger, die Borsten am Kopf und Pronotum sind spitzig oder fast so und die beiden miteinander vereinigten Fühlerendglieder sind deutlich länger als bei *americanus*. Von *fuliginosus*

unterscheidet sich *ulmi* leicht durch die viel geringere Grösse, die viel längeren Borsten am Abdomenende, die verschiedene Fühlerfärbung und besonders das am Ende mit dem 7. breit vereinigte 8. Glied, das bei *fuliginosus* an der Basis deutlich schmäler ist als das 7. an der Spitze. Die anderen Arten sind nicht zu verwechseln.

Scotothrips nom. n.[1]

(*Adiaphorothrips* auctt. *nec* Bagnall.)

Körper mächtig. Kopf viel länger als breit und viel länger als der Prothorax, vorn nicht vorgezogen, nach hinten verengt. Wangen mit Dörnchen besetzt. Augen mässig gross. Fühler 8-gliedrig, die mittleren Glieder lang, die distalen unten ohne Fortsatz. Scheitel mit 1 Paar sehr langen (und 1 Paar kurzen) Postocularborsten, alle anderen dorsalen Kopfborsten klein. Pronotum vorn stark gebuchtet, seine Borsten lang, auch die der Vorderecken, die inneren anteromarginalen klein bis mässig lang. Vorderschenkel beim ♀ etwas beim ♂ stark verdickt, wie die Tibien ohne Zahnbildungen, aber die Vordertarsen bei beiden Geschlechtern mit Zahn der beim ♀ dreieckig ist. Flügel gleichbreit, leicht gebogen, zum Ende etwas erweitert, mit zahlreichen Schaltwimpern. Borsten am Abdomen lang. Tubus ungefähr von Kopfeslänge, regelmässig konisch.

Typus generis : *Adiaphorothrips elephas* Karny.

Adiaphorothrips simplex Bagn., der Typus dieser Gattung, ist das ♂ einer *Machatothrips*-Art, wie ich mich durch die Untersuchung der Type überzeugen konnte; so ist *Adiaphorothrips* ein Synonym von *Machatothrips*; es musste also für die unter dem Namen *Adiaphorothrips* beschriebenen anderen Arten ein neuer Name geschaffen werden.

Zur Gattung *Scotothrips*, wie sie eben von mir charakterisiert wurde, gehört sicher noch die Art *differens* Pr. Ob alle anderen Arten hierher oder zu *Diceratothrips* oder anderswohin gehören, muss die nähere Untersuchung derselben lehren.

Chirothripoides Bagnall.

Diese Gattung gehört zu den Phlaeothripiden und kann m.E. nicht als besondere Familie gelten. Die Gattung hat in der Gruppe der Plectrothripini zu stehen, da sie alle wesentlichen Merkmale dieser ziemlich scharf abgegrenzten Gruppe aufweist. Sie kommt *Mastigothrips* Pr. am nächsten.

Cnestrothrips Pries.

Die Gattung *Cnestrothrips* ist von mir bisher nur in meiner Uebersicht über die die *Machatothrips*-Arten kurz erwähnt worden (1932, *Rev. zool. bot. Afr.* **22** : 344). Sie ist im folgenden näher behandelt.

Fühler 8-gliedrig, Glieder lang, 8. am Grunde etwas geschnürt. Mundkegel lang, am Ende schmal abgerundet. Kopf länger als breit, länger als der Prothorax, Wangen mit starken, dunklen Dornen besetzt. Vor dem hinteren Ocellus ein Paar deutliche Borsten; 1 Paar Postocularborsten; Kopf- und Pronotum-Borsten lang, am Ende abgerundet oder schwach geknöpft; Vordereckenborsten des Pronotums gut entwickelt, die inneren Vorderrandborsten klein; *Vorderecken des Prothorax mit einer Gruppe von kurzen aber kräftigen, dunklen Stacheln.* Kopf vorn nicht vorgezogen. Vorderschenkel (♀) *mässig* verdickt, am Innenrand mit einer unregelmässigen Reihe kleiner, spitz-dreieckiger dunkler Körnchen, ferner mit einer Anzahl Dörnchen mehr gegen die Oberseite des Schenkels. Vordertarsen

[1] ὁ σκότος = das Dunkel.

mit dreieckigem, stumpfem Zahn (beim ♂ wahrscheinlich mit langem Zahn, Vorderschenkel des ♂ wahrscheinlich ohne Zähnchenreihe). Flügel in Form und Färbung wie bei *Machatothrips*, ebenso das Abdomen.

Typus generis : *C. dammermani* Pr. (*loc. cit.*).

Die Gattung kommt ganz nahe *Machatothrips* und ist nur durch die Ausbildung der Vorderschenkel (Höckerchenreihe und Stacheln), ferner die Stachelgruppe an den Vorderecken des Prothorax verschieden.

Cnestrothrips dammermani Pries.

♀. Schwarz, einschliesslich Fühler und Beine, Kopfstacheln und Schenkeldornen; Interocellarborsten und Postocularborsten sowie die langen Prothoraxborsten hyalin (oder nur am Grunde leicht getrübt); Borsten am Abdomen weisslich, die des 9. Segmentes und die Analborsten gelblich, am Grunde stärker getrübt. Flügel graubraun getrübt, mit einem in der Mitte geknickten und verdickten Längsstreif (wie bei *Machatothrips*).

Kopf 425 (samt IAF 460) μ lang, an den Augen 310, im hinteren Drittel 296 μ breit; die Augen hinten etwas eckig, ihr lateraler Durchmesser 130 μ, Wangen parallelseitig, hinten nahe der Kopfbasis geschnürt, Scheitelhinterrand gewulstet; Kopfseiten mit 6–7 sehr wohl entwickelten Stacheln jederseits, wovon der erste 43–47 μ hinter den Augen am längsten (55–60 μ) ist und von den anderen, die im hinteren Drittel eine Gruppe bilden, etwas entfernt ist; die Stacheln sind dunkel und haben am Ende eine hyaline Abrundung; IAF eingekerbt; hintere Ocellen im vorderen Drittel der Augenlänge; vor denselben je eine lange, *helle*, am Ende stumpfe Borste, Postocularborsten hell, lang, hinter dem Innenrande der Augen eingelenkt, voneinander 134 μ entfernt; Mundkegel lang, aber nicht scharfspitzig. Fühler 1·08–1·1 mm. lang; Gliederlängen(-breiten): ?(65), 91 (51), 193–197 (51), 193–197 (57–59), 193 (49–51), 162–166 (43), 91 (32), 87 (21) μ; 1. Glied gewölbt, zur Basis etwas, zum Ende stark verengt, oben mit einer kurzen, dunklen stumpfen Borste; das 2. mit 7 (oben 4 unten 3) solchen Borsten, das 3. Glied lang, mit einer Reihe dünner und langer, am Ende offener Borsten, das 4. ebenso, das 8. am Grunde verengt, aber nicht gestielt, vom 7. scharf abgesetzt; das 3. Glied mit 2 (1 aussen, 1 unten), 4. Gl. mit 4, das 5. und 6. mit 2^{+1}, das 7. mit 1d. Prothorax etwa 275 μ lang, seine Oberfläche zeigt eine deutliche Skulptur, die aus anastomosierenden Querlinien besteht, die zu beiden Seiten der Mitte zu einem Wirbel gedreht sind; Vorderrand mässig ausgebuchtet; Pronotum-Borsten wohl entwickelt, die Vorderecken Borsten mässig lang (? 70 μ), die Hintereckenborsten lang (? 177 μ), stumpf, hell, wie es auch die Coxenborsten sind; Vorderecken des Pronotums mit einer Gruppe (7–11) kurzen Dornbörstchen oder Stachelchen. Vorderschenkel dicker als die übrigen, aber im Ganzen nicht als stark erweitert zu bezeichnen, Dicke etwa 216 μ; die basale Schenkel-Aussenecke mit einigen wenigen schwachen Stacheln, die Innenränder derselben mit einer Reihe von 10–12 niedrigen, schwarzen, dreieckigen Höckern versehen (8–10 μ hoch), in der Schenkelmitte, innen, etwas mehr gegen die obere Schenkelfläche stehen einige dunkle (6), mässig dicke Stacheln. Vorderschienen einfach, Vordertarsen mit einem kurzen, breit dreieckigen, fast stumpfen Zahn. Pterothorax vorn 727 μ breit, nach hinten verengt. Flügelfransen stehen sehr dicht, Schaltwimpern-Zahl 59. Mitte- und Hinterschenkel am Aussenrande mit einigen kurzen Dornbörstchen. Borsten 1 am 9. Segment 520, B. 2: 554 μ, lang, gerade, haarartig. Tubus 502–520 μ lang, am Grunde etwa 156–173, am Ende genau 70 μ breit. Analborsten lang, etwa 520 μ. Die längste Lateralborste am 7. Segment etwa 345, am 8. Segment nur 215 μ.

Fundort: Riouw Archipel: Doerian, vi.1923, von niederen Pflanzen gekätschert (leg. *Dammerman*, No. 33). Holotype in meiner Sammlung.

Polytrichothrips gen. n.

Fühler 8-gliedrig, die mittleren Glieder mässig lang (cf. *Cryptothrips*), 8. Glied am Grunde verengt, vom 7. scharf abgesetzt; Kopf gestreckt, viel länger als breit, Seiten leicht gewölbt, nach vorn und hinten gleichmässig verengt, mit wenigen, aber starken, dunklen Stacheln besetzt. Augen ziemlich klein, an den Vorderecken des Kopfes. Ocellen klein. Mundkegel breit abgerundet. *Zwei Paar sehr lange, haarartige, geschwungene Postocularborsten, 1 Paar sehr lange Postocellarborsten vorhanden.* Vorderbeine einfach, aber dicker als die übrigen; Vordertarsen mit deutlichem Zahn (♀), Schenkel und Tibien mit einzelnen langen Haaren. Prothorax viel kürzer als der Kopf, seine Borsten *ungewöhnlich* lang, haarartig. Flügel (anscheinend) fehlend. Borsten am 6. und 7. Segment des Abdomens ungemein lang, während die des 8. und 9. Segmentes kürzer sind als der lange Tubus. Dieser konisch, im hinteren Drittel stark eingezogen. Analborsten mässig lang.

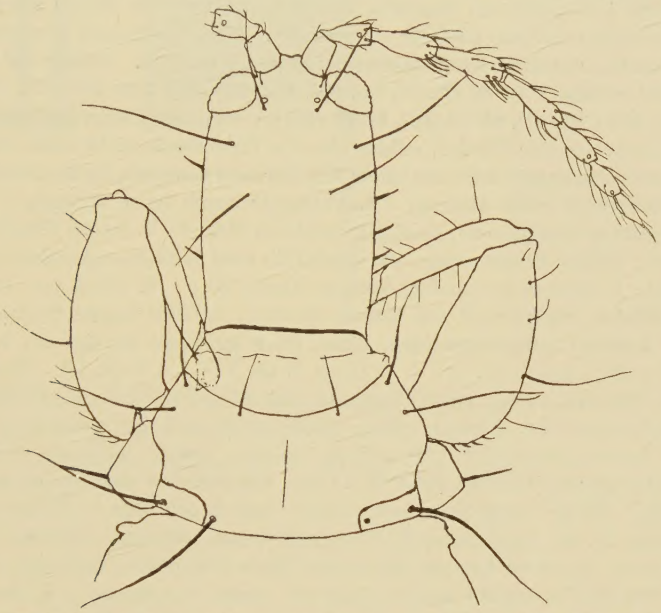

Fig. 1.—*Polytrichothrips pilosus* gen. et sp. n. Kopf und Prothorax des ♀.

Typus generis: *P. pilosus* sp. n.

Nahe *Scotothrips* (*Adiaphorothrips* auctt. nec Bagnall) und *Dichaetothrips* Hood; Postocellarborste wie bei letzterer Gattung, aber die überaus langen, haarartigen, meist geschwungenen Borsten des Körpers und seiner Anhänge, besonders die ungewöhnlich langen Prothoraxborsten (anteroangularen!) gestatten nicht eine Vereinigung dieser Art mit *Dichaetothrips*.

Polytrichothrips pilosus sp. n. (fig. 1).

♀. Schwarz, samt Borsten, nur die Abdominalborsten ein wenig lichter, gelblich sind nur die des 6. und 7. Segmentes. Vorderschienen innen bisweilen der Länge nach undeutlich aufgehellt, Vordertarsen bräunlich, das 1. und 6.–8. Fühlerglied ganz dunkel, das 2. am Grunde dunkel, gegen das Ende allmählich bräunlich aufgehellt, das 3. gelbbraun, am Endrand getrübt, 4. trüb-gelbbraun, etwa im Enddrittel stark getrübt, das 5. in der Grundhälfte dunkel gelbbräunlich aufgehellt, Endhälfte ganz dunkel; bei der Holotype sind die Fühler etwas dunkler, 5. Glied in der Grundhälfte nur wenig bräunlich aufgehellt.

Kopf 519–536 (samt IAF 554–571) μ lang, an den Augen 320–337, in der Mitte der Wangen 370 μ breit (bei kleinen Stücken 337); Augendurchmesser nur etwa 110 μ, die Wangen hinter denselben etwa 433 μ lang; Wangen ganz leicht der Länge nach gewölbt, sodass die kleinen Augen ein wenig abgesetzt sind und der Kopf nach hinten und nach vorn ganz leicht verengt erscheint; Augen auf der Unterseite etwas vorgezogen; Abstand der Augeninnenränder 156 μ; Fühlergruben-Distanz 33–35 μ; Ocellen klein, im hinteren Drittel der Augen gelegen, Distanz der hinteren Ocellen 90–95 μ; 1 Paar schwächere Borsten (? 39–47 μ) vor und 1 Paar sehr langer (177–236 μ) hinter den hinteren Ocellen, in der Höhe des Hinterrandes der Augen; diese Borsten sind wie die Postocularborsten geschwungen, haarartig, spitzig, dunkel; Postocularborsten 236–296 μ lang, die hinteren Postocularen 197–235 μ lang; die ersteren sind etwa 59–63 μ von den Augen entfernt und stehen vom Rande nur wenig weit ab, also hinter der Mitte der Augen gelegen, nicht etwa hinter ihrem Innenrand; die hinteren Postocularen sind einander viel mehr genähert (Distanz 180 μ); Kopfseiten mit 1–3 deutlichen Stacheln versehen, die von den Augen sowohl wie vom Scheitelrande weiter entfernt sind als voneinander. Mundkegel breit gerundet, bei stark gedehnten Stücken die Mitte des Prosternums nicht überragend. Fühler 848–865 μ lang; Gliederlängen(-breiten): 59–63 (B. 71, Sp. 59), 102–110 (51), 134–150 (57), 138–158 (63), 142–158 (55), 102–112 (47), 89–93 (43), 87–91 (32) μ; zwischen Fühlerbasis und Kopf vorn ein kleiner einspringender Winkel, sodass also die Fühlerbasis nicht dicht an die Augen anschliesst, man kann aber nicht von einem Kopffortsatz sprechen, da die kleine Absetzung den Augenvorderrand nicht überragt. 1. Fühlerglied zum Ende verengt, 2. geradseitig, am Ende abgestutzt erscheinend, areola im vorderen Drittel; 3. Gl. im Grunddrittel stark quergerunzelt; Fühler-Borsten lang, und überall in zwei Wirteln angeordnet, am 3. Glied sind am Ende 6 Borsten vorhanden, längste Borste 80 μ; 6. Glied am Grunde etwas, 7. Glied deutlicher geschnürt, 8. am Grunde verengt; 3. Glied aussen im basalen Drittel ganz leicht konvex; Sinneskegel lang, dünn, stark gebogen, spitzig, am 3. Gl. 1 + 1, am 4. Gl. 2 + 2^{+1}, am 5. Gl. 1^{+1} + 1^{+1}, am 6. Gl. 1^{+1}, am 7. Gl. 1d. Pronotum kurz, in der Mitte 329–346 μ lang, ohne Coxen 588, mit Coxen 727 μ breit, Vorderrand stark konkav, Hinterrand stark konvex; innere Vorderrandborsten gut entwickelt, 142 μ (oder mehr), Vorderecken-Borsten 217–236 μ lang, dunkel, spitzig, haarartig, Lateralborsten 235–275 μ, Hinterecken-Borsten 294–312 μ lang; Coxenborste kurz (90 μ), starr, dunkel. Vorderschenkel leicht verdickt, Vordertarsen mit deutlichem, gekrümmtem Zahn; Schenkel aussen an der Basis mit einigen ungleich langen, gebogenen Haaren, in der Mitte aussen mit einen ungemein langem, gebogenen Haar (255–275 μ) und auch sonst einigen kürzeren; Vordertibien aussen an der Basis mit einem sehr langen (z.B. 185 μ) lichten, geraden Haar; die Mittel- und Hinterschenkel haben aussen in der Mitte ein mässig langes, gebogenes Haar, die Mittel- und Hintertibien hingegen im ersten Drittel ein längeres, lichteres (337 μ) und ein kürzeres dunkleres, gebogenes Haar; auch vor der Spitze die übliche, lange gerade Haarborste und eine kürzere. Pterothorax kurz, breiter als lang, 657–727 μ breit. Abdomen mächtig, Tubus 519–545 μ lang, am Grunde vielleicht etwa 190, am Ende genau 67–71 μ breit. Länge der lateralen Abdominal-Borsten am 5. Sgm. 467, am 6. 536–554, am 7. Sgm. 623–640, am 8. Sgm. 260, am 9. (B. 1, 2) 380 μ; die Borsten am 8. und 9. Sgm. gerade, die übrigen geschwungen. Analborsten kurz, 240–260 μ; Abdomen am 5. Segment 605–690 μ breit.

Fundort: 2 ♀♀ und 2 Larven (II.), Sarawak: Kalabit country (3000 ft.) (leg. *Mjöberg*). Holotype in der Sammlung des Museums Stockholm, Paratype in meiner Sammlung.